

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (Currently Amended) Method for measuring the degree of ~~fi~~bre fiber concentration in a pulp inside a machine (4), in particular a refiner for the manufacture of paper pulp, which machine (4) comprises a stator (5) and an opposing rotor (3), which form a grinding gap (6) for the pulp, with the stator (5) being provided with at least one sensor device (7), designed to interact with a rotor surface and comprising an impedance meter body (10) with a sensor surface (18), which impedance meter body (10) is mounted in the stator (5) in such a way that it can move axially, ~~characterized in that~~ wherein measurements of the impedance between the rotor surface and the sensor surface (18) are carried out during an axial movement of the impedance meter body (10) and ~~in that~~ wherein the measured impedance differences are utilized together with the size of the movement to determine the dielectric constant of the pulp, from which the degree of ~~fi~~bre fiber concentration of the pulp is derived.

2. (Currently Amended) Method for measuring the degree of ~~fi~~bre fiber concentration according to Claim 1, ~~characterized in that~~ wherein the size of the movement is measured using a measurement device (21) that communicates with the impedance meter body (10).

3. (Currently Amended) Method for measuring the degree of ~~fi~~ber ~~fiber~~ concentration according to Claim 1 ~~or 2~~, ~~characterized in that~~ wherein the size of the grinding gap (6) is also measured and the value of this is utilized in determining the dielectric constant of the pulp.

4. (Currently Amended) Sensor device (7) for measuring the degree of ~~fi~~ber ~~fiber~~ concentration in a pulp inside a machine (4), in particular a refiner for the manufacture of paper pulp, which machine (4) comprises a stator (5) and an opposing rotor (3), which form a grinding gap (6) for the pulp, which sensor device (7) is designed to be mounted in the stator (5) to interact with a rotor surface and comprises an impedance meter body (10) with a sensor surface (18), which impedance meter body (10) is movable in an axial direction and is connected to an operating mechanism (13) for axial movement relative to the housing (11), ~~characterized in that~~ wherein the impedance meter body (10) is arranged to measure the impedance between the sensor surface (18) and the rotor surface during axial movement thereof and ~~in that~~ wherein the measured impedance differences are utilized together with the size of the movement of the impedance meter body (10) to determine the degree of ~~fi~~ber ~~fiber~~ concentration in the pulp.

5. (Currently Amended) Sensor device (7) according to Claim 4, ~~characterized in that~~ wherein essentially the whole of the impedance meter body (10) is clad with an insulating material (19).

6. (Currently Amended) Sensor device (7) according to Claim 3 ~~or~~ 4, characterized in that wherein a measuring device (21) communicates with the impedance meter body (10) for measuring the axial movement thereof.
7. (Currently Amended) Sensor device (7) according to ~~any one of Claims 5 or 6,~~ characterized in that Claim 5, wherein the impedance meter body (10) is also arranged to measure the size of the grinding gap (6).
8. (Currently Amended) Sensor device (7) according to ~~any one of Claims 5 or 6,~~ characterized in that Claim 5, wherein the sensor device (7) also comprises a distance meter body (9), separate from the impedance meter body (10) and arranged to measure the size of the grinding gap (6).
9. (New) Method for measuring the degree of fiber concentration according to Claim 2, wherein the size of the grinding gap (6) is also measured and the value of this is utilized in determining the dielectric constant of the pulp.
10. (New) Sensor device according to Claim 4, wherein a measuring device communicates with the impedance meter body for measuring the axial movement thereof.
11. (New) Sensor device according to Claim 6, wherein the impedance meter body is also arranged to measure the size of the grinding gap.

12. (New) Sensor device according to Claim 6, wherein the sensor device also comprises a distance meter body, separate from the impedance meter body and arranged to measure the size of the grinding gap.